



**California Environmental Protection Agency
Department of Toxic Substances Control**

HAZARDOUS WASTE FACILITY PERMIT

Permit Number: 97-NC-012

Facility Name:

Aerojet-General Corporation
P.O. Box 13222
U.S. Highway 50 and Aerojet Road
Sacramento, California 95813-6000

Owner Name:

Aerojet-General Corporation
P.O. Box 13222
Sacramento, California 95813-6000

Operator Name:

Aerojet-General Corporation
P.O. Box 13222
Sacramento, California 95813-6000

Facility EPA ID Number:

CAD000030494

Effective Date of Permit:

June 10, 1997

Expiration Date of Permit:

February 28, 2007

Date Modified:

September 20, 2007

Modification Number:

MOD-NC1-041802-A
MOD-NC1-072202-B
MOD-NC1-090902-A
MOD-NC1-011403-A
MOD-NC1-051403-A
MOD-NC1-060503-A
MOD-NC1-092203-A
MOD-NC1-063004-A
MOD-NC1-102705-A
MOD2 NC1-2007-025

Pursuant to Section 66270.42, Title 22, Division 4.5, California Code of Regulations, the Hazardous Waste Facility Permit issued June 10, 1997, effective June 10, 1997, is hereby modified to incorporate the pending closure of RCRA-C Bldg. 03010 and the improvements to Bldg. 03006, as described in No. 15 of Part IV, Permit Modifications. Pages 4, 6, and 27 were modified accordingly, and all of the page headings were modified to indicate the date of the permit modification. The revised permit consists of 27 pages plus Appendix A and Attachments 1-7.

James M. Pappas, P.E., Chief
Northern California Permitting and
Corrective Action Branch
Department of Toxic Substances
Control

Date:

**AEROJET SACRAMENTO OPERATIONS
SACRAMENTO, CALIFORNIA**

**HAZARDOUS WASTE FACILITY PERMIT
MODIFICATION NO. 15**

TABLE OF CONTENTS

PART I	DESCRIPTION OF THE FACILITY.....	3
1.	OWNER	3
2.	OPERATOR.....	3
3.	LOCATION	3
4.	OPERATIONS	3
5.	OPERATION PLAN	4
6.	REFERENCES AND TERMINOLOGY	5
7.	EFFECT OF PERMIT	5
8.	COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)	6
PART II	SPECIAL CONDITIONS	7
PART III	FACILITY ACTIVITY UNITS	9
PART IV	CORRECTIVE ACTION.....	10
1.	AUTHORITY	10
2.	STATEMENT OF PURPOSE.....	10
3.	SUMMARY OF CORRECTIVE ACTION.....	10
4.	PROJECT COORDINATOR	11
5.	WORK TO BE PERFORMED	11
	(a) INTERIM MEASURES (IM).....	12
	(b) POTENTIAL OR IMMEDIATE THREATS/NEWLY IDENTIFIED RELEASES/NEWLY IDENTIFIED SWMUs	12
	(c) PHASE I RCRA FACILITY INVESTIGATION (RFI)	13
	(d) RCRA FACILITY INVESTIGATION (RFI)	13
	(e) CORRECTIVE MEASURES STUDY (CMS)	15
	(f) CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)	16
	(g) CORRECTIVE MEASURES IMPLEMENTATION (CMI)	16
6.	DTSC APPROVAL/REPORTING/PROPOSED CONTRACTOR/ADDITIONAL WORK	17
7.	QUALITY ASSURANCE	19
8.	SAMPLING/ACCESS.....	20
9.	RECORD PRESERVATION	22
10.	DISPUTE RESOLUTION	22
11.	MODIFICATION.....	23
PART V	PERMIT MODIFICATION HISTORY	24

Appendix

A. Unit Descriptions

Attachments

1. Scope of Work for a Health and Safety Plan
2. Scope of Work for a Phase I RFI
3. Scope of Work for a RCRA Facility Investigation
4. Scope of Work for a Corrective Measures Study
5. Scope of Work for Progress Reports
6. Facility Map Showing the Location of all SWMUs
7. Facility Map Showing the Location of Bldgs. 03006 and 03010

PART I DESCRIPTION OF THE FACILITY

1. OWNER

The owner of the facility is Aerojet-General Corporation, (hereafter "owner"). Aerojet-General Corporation is a wholly owned subsidiary of GenCorp Incorporated.

2. OPERATOR

The operator of the facility is Aerojet-General Corporation (hereafter "operator").

3. LOCATION

Aerojet-General Corporation is located in eastern Sacramento County, California, approximately 15 miles east of the City of Sacramento, near the intersection of U.S. Highway 50 and Aerojet Road. The facility consists of the land previously permitted minus the "Carve-out Lands" specified in the Stipulation and Order Amending July 10, 1989 Order RE: Partial Consent Decree, dated November 15, 2002.

4. OPERATIONS

- (a) Aerojet-General Corporation occupies approximately 5,900 acres of land in a suburban region of Sacramento County that is largely characterized by industrial uses. A substantial portion of the Aerojet property and its immediate vicinity are covered with mine tailings.

Liquid propellant rocket engines and solid propellant fuel motors are fabricated, assembled, tested, and refurbished at the Aerojet facility. These activities include the manufacture of metal parts, including casting, deep-drawing, and other methods of forming. Aerojet also produces specialty chemicals, uses electrolytic processes, and performs engineering research and development at its Sacramento Operations. The chemicals used at the facility include explosives, oxidizers, acids, light metal hydrides, plastics, resins, solvents and other products. In the process of the operations, Aerojet generates hazardous wastes that are either treated on-site or disposed of at an authorized off-site hazardous waste facility. Treatment processes at the facility include both chemical (e.g., pH adjustment, precipitation, ultrafiltration, etc.) and physical treatment (e.g., rinsing, compaction, evaporation, etc.). Aerojet also stores hazardous wastes at the facility in containers and tanks.

There were two deep injection wells used for the disposal of wastewater from 1963 to 1968 and from 1975 to 1985. The wells were destroyed in 1994 in accordance with a Department of Toxic Substances Control approved closure plan. There are four deep multiple-completion monitoring wells, with a fifth well soon to be constructed, that have and will continue to provide data to determine the direction, rate and quality of the groundwater. Additionally, a few of the monitoring wells will provide data to evaluate the leakage of the wastewater into the upper water bearing zone.

(b) Hazardous waste management units authorized by this Permit have been grouped into the following complexes:

1. Resource Conservation and Recovery Act (RCRA)-C
2. RCRA-J
3. RCRA-L (Clean closed, December 5, 2006)
4. RCRA-Z Line 02 (Clean closed, November 6, 2006)
5. RCRA-Z Dilute (Certified closure, December 29, 2005)
6. RCRA-Z NP (Certified closure, December 29, 2005)
7. RCRA-PDP (Certified closure, December 27, 2005)
8. Deep Injection Wells 1 and 2 (Post-Closure Maintenance)

The specific hazardous waste management units are described in detail in Appendix A of this Permit, which is attached hereto and incorporated herein by this reference. Only the units, capacities and waste types specified in Appendix A are authorized for hazardous waste management activities specified by this Permit.

5. OPERATION PLAN

(a) The Operation Plan herein referenced consists of:

Part A Application originally signed August 20, 1996, modified May 6, 1999, July 24, 2003, April 2004, July 25, 2005, **and March 7, 2007.**

Aerojet-General Corporation, April 2004, Hazardous Waste Facility Permit Application, Part B, Treatment and Storage Facility, Environmental Protection Agency (EPA) No. CAD000030494, Volumes 1, 2 and 3.

(b) The Waste Analysis Plan, the Contingency Plan, the Closure Plans, contained within the Part B referenced above.

6. REFERENCES AND TERMINOLOGY

All parts in this Permit are identified by Roman numerals. The items set forth in each part shall apply to the owner, and/or operator. Unless explicitly stated otherwise, all cross-references to items in this Permit shall refer only to items occurring within the same part. "DTSC" as used herein shall refer to the Department of Toxic Substances Control.

7. EFFECT OF PERMIT

- (a) The owner and/or operator shall comply with the provisions of California Health and Safety Code division 20, including, but not limited to, Chapters 6.5 and 6.7, and California Code of Regulations, title 22, division 4.5. The issuance of this Permit by DTSC does not release the owner and/or operator from any liability or duty imposed by federal or state statutes or regulations or local ordinances, except the obligation to obtain this Permit. In particular, the owner and/or operator shall obtain the permits required by other governmental agencies, at the federal, state and local levels under all applicable laws, including but not limited to, the applicable land use planning, zoning, hazardous waste, air quality, water quality, and solid waste management laws for the construction and/or operation of the Facility.
- (b) The owner and/or operator are permitted to treat and store hazardous wastes in accordance with the conditions of this Permit. Any treatment or storage of hazardous wastes not authorized by this Permit or in a manner not authorized by this Permit is prohibited.
- (c) Compliance with the terms of this Permit does not constitute a defense to any action brought under any law governing protection of public health or the environment, including, but not limited to, one brought for any imminent and substantial endangerment to human health or the environment.
- (d) DTSC's issuance of this Permit does not prevent DTSC from adopting or amending regulations which impose additional or more stringent requirements than those in existence at the time this Permit is issued and does not prevent the enforcement of these requirements against the owner and/or operator of the permitted facility.

8. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

DTSC has certified a Master Environmental Impact Report (MEIR) for the project **(and an Notice of Exemption for Modification No. 15)**. The MEIR has been prepared in accordance with the requirements of Public Resources Code Section 21000 et seq. and the CEQA Guidelines, of California Code of Regulations, title 14, section 15070 et seq.

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PART II SPECIAL CONDITIONS

1. In the event that the improvements to RCRA-C Building 03006 vary from the proposed improvements submitted with the March 7, 2007 Class 2 Permit Modification request, Aerojet shall submit "as-build" drawings and/or an updated list of building improvements to DTSC within 90 days of the permit modification approval date.
2. Issuance of this Permit authorizes the owner and/or operator to install or modify the proposed changes to storage and/or treatment systems as listed in Appendix A of this Permit for the purpose of achieving compliance with the requirements of California Code of Regulations, title 22, division 4.5.
3. Issuance of this Permit rescinds the Temporary Authorization that DTSC originally issued on December 4, 1995 for the storage of hazardous wastes in RCRA-C buildings 48001, 48002, 48006, 48008, 48009, 48010, 48026, 48027, 03010, 24004 and 24005.
4. The recrystallizer is not currently utilized for the treatment of nitroplasticizer (NP) waste. Should the owner and/or operator propose to use the recrystallizer to treat NP wastes and the associated storage and treatment units at RCRA-I to manage NP waste, it shall submit a health risk assessment (HRA) to DTSC for its review and approval. This HRA will be used as a basis to determine the conditions and/or operating parameters necessary for this unit to meet the health risk criterion concerning toxic air contaminants from the facility. The criterion as set forth in the Mitigation Measures of the MEIR is that the "estimated additional cancer risk is less than one in a million." The incorporation of the conditions and/or operating parameters for this unit will be subject to the permit modification requirements set forth in California Code of Regulations, title 22, sections 66270.41 and 66270.42.
5. Within 90 days of the effective date of the Permit, DTSC will re-evaluate the facility's closure cost estimates using the "CostPro" model. This may require the submission of additional information and may result in subsequent modifications of the closure cost estimates and financial assurance requirements.
6. This Permit authorizes the owner and/or operator to implement the delayed closure in accordance with DTSC Management Memo EO-94-003-MM for unit RCRA-T (building 02030).
7. The owner and/or operator shall implement the following additional mitigation measures that were addressed in the cumulative impact analysis section of the Master Environmental Impact Report:

- (a) The owner and/or operator shall comply with any applicable air quality control strategies required by the Sacramento Metropolitan Air Quality Management District (SMAQMD) and DTSC to reduce criteria air pollutant emissions after adoption by SMAQMD.
 - (b) The owner and/or operator shall implement any applicable air quality control strategies required by the SMAQMD and DTSC to reduce toxic air contaminant emissions. The owner and/or operator shall also comply with public notification requirements, as applicable, under the Air Toxic "Hot Spots" Information and Assessment Act, commonly referred to as AB 2588 (HSC section 44300) or the Safe Drinking Water and Toxics Enforcement Act, commonly referred to as Proposition 65 (HSC section 25249.5).
 - (c) The owner and/or operator shall have an industrial hygienist analyze the noise levels produced by the proposed project's drum crusher and other on-site industrial activities. If workers using noise-producing equipment on-site could be exposed to the noise levels exceeding Occupational Safety and Health Administration (OSHA) standards, OSHA hearing programs shall be enforced. The results of this analysis shall be submitted to DTSC within 60 days of the effective date of this permit.
8. Unlined surface impoundments RCRA-L, -M, -N, -P and -Q were previously used for the disposal of hazardous waste at the facility and are thus subject to the requirements of corrective action. The surface impoundments are also listed as source sites under the Partial Consent Decree filed in the United States District Court, Eastern California District, on 23 June 1989. The consent decree requires Aerojet to prepare a Remedial Investigation/Feasibility Study (RI/FS) report of the above identified source sites. Stage 1 of the RI has been submitted to the Site Mitigation Program (SMP) of DTSC. Any information that has already been generated for the RI/FS may be used in the effort to satisfy the requirements of corrective action for these specific units. To avoid duplication of efforts between different DTSC programs, any remediation under corrective action that will be required by the permitting branch to be performed on the surface impoundments under this permit will be limited to surface and near surface contamination which will produce a substantial reduction in risk. Any further contamination beyond these limits will be referred to SMP of DTSC for remediation. Referral of any remediation to DTSC SMP does not waive the rights of DTSC to invoke RCRA corrective action authority to address contamination from these impoundments at some time in the future. In addition, satisfaction of any requirement for corrective action will not be utilized for the satisfaction of the consent decree without the express authorization of DTSC.

PART III FACILITY ACTIVITY UNITS

1. This Permit authorizes operation of the facility units and listed activities for the waste codes and capacities as provided in Appendix A of this Permit. This Permit also authorizes installation of the equipment, tank systems or components as indicated. Any modifications to the designated units and/or permitted activities, other than those specifically designated herein, requires a permit modification approval by DTSC in compliance with the permit modification regulations in California Code of Regulations, title 22.

PART IV CORRECTIVE ACTION

1. AUTHORITY

Health and Safety Code section 25200.10 and California Code of Regulations, title 22, section 66264.708 require that permits issued by DTSC must address corrective action for releases of hazardous waste including hazardous constituents from any Solid Waste Management Unit (SWMU) at the Facility, regardless of when the waste was placed in the unit.

Failure to comply with any term or condition set forth in this Part of the Permit in the time or manner specified herein will subject the owner and/or operator to possible enforcement action and penalties pursuant to Health and Safety Code section 25187.

In addition, failure to submit the information required in this Part of the Permit, or falsification and/or mis-representation of any submitted information, is grounds for termination of this Permit (22 Cal. Code of Regs. 66270.43).

2. STATEMENT OF PURPOSE

The corrective action objectives contained in this Part of the Permit are: (1) to perform a RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release of hazardous waste and/or hazardous constituents at or from the Facility; (2) to perform a Corrective Measures Study (CMS) to identify and evaluate alternatives for the corrective action necessary to prevent, mitigate and/or remediate any releases of hazardous wastes or hazardous constituents at or from the Facility; and (3) to perform any other activities necessary to correct actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste or hazardous constituents at the Facility.

3. SUMMARY OF CORRECTIVE ACTION

A RCRA Facility Assessment (RFA) was conducted in 1994 at the Aerojet facility in order to identify the SWMUs and areas of concern (AOCs) at the facility. The purpose of the RFA was to identify environmental releases or potential releases from SWMUs that may require corrective action. A previous RFA completed in 1991 was considered to be inadequate and incomplete by both the U.S. Environmental Protection Agency (EPA) and DTSC.

SWMUs

In the RFA, Table 1 identifies SWMUs and AOCs that require additional information or review. Because these areas have not been adequately characterized, corrective action will be required by this Permit.

Based on this RFA, a Release Assessment and Phase I RFI are required for the fifteen SWMUs and AOCs that are listed in Table 1 of the 1994 RFA. In addition to these units, a Release Assessment and RFI will be required for the surface impoundments designated by the complexes RCRA-L, -M, -N, -P and -Q.

The remainder of the SWMUs and AOCs listed in the RFA have been or will be addressed by other local, state or federal agency corrective action programs or have been determined not to meet the definition of a SWMU.

4. PROJECT COORDINATOR

- (a) Within 14 days of the effective date of this Permit, the owner and/or operator shall designate a Project Coordinator for corrective action and shall notify DTSC in writing of the Project Coordinator it has selected. The Project Coordinator shall be responsible for overseeing the implementation of corrective action at the Facility in accordance with this Part of the Permit and for designating a person to act in his/her absence. DTSC will also designate a Project Coordinator. All communications between the owner and/or operator and DTSC, and all documents, reports, approvals and other correspondence concerning the activities performed pursuant to this Part of the Permit shall be directed through the Project Coordinators.
- (b) The owner and/or operator shall provide at least seven (7) days written notice to DTSC prior to changing Project Coordinator.
- (c) The absence of DTSC Project Coordinator from the Facility shall not be cause for the stoppage of work.

5. WORK TO BE PERFORMED

The owner and/or operator shall perform the work specified in this Part of the Permit in the manner and by the dates specified herein. All work undertaken pursuant to this Part of the Permit shall be performed in a manner consistent with, at a minimum, all of the following: the attached Scopes of Work, DTSC-approved RFI Workplan, CMS Workplan, and any other DTSC approved Workplans, and applicable State law and implementing regulations. All attachments to this Permit are incorporated by reference, as if fully set forth herein.

The owner and/or operator shall complete the tasks required by this Part of the Permit in accordance with the schedules of compliance. Schedules of compliance may provide for implementation of tasks beyond the termination date of this Permit. All corrective action shall continue until the media cleanup standards are achieved and all required work has been completed.

(a) INTERIM MEASURES (IM)

- (1) The owner and/or operator shall evaluate available data and assess the need for IM in addition to those specifically required by this Part of the Permit. The IM assessment shall be incorporated into the Current Conditions Report portion of the RFI. IM shall be used whenever possible to achieve the goal of stabilization which is to control or abate immediate threats to human health and/or the environment, and to prevent or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.
- (2) All IM Workplans shall ensure that the IMs are designed to mitigate current or potential threat(s) to human health and/or the environment, and should, to the extent practicable, be consistent with the objectives of, and contribute to the performance of any future remedy, which may be required at the Facility.
- (3) Concurrent with the submission of an IM Workplan, the owner and/or operator shall submit to DTSC a Health and Safety Plan. The Health and Safety Plan shall be developed in accordance with the Scope of Work for a Health and Safety Plan, Attachment 1 of this Permit.

(b) POTENTIAL OR IMMEDIATE THREATS/NEWLY IDENTIFIED RELEASES/NEWLY IDENTIFIED SWMUs

- (1) In the event the owner and/or operator identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new SWMUs not previously identified, the owner and/or operator shall notify DTSC orally within 24 hours of discovery and notify DTSC in writing within 10 days of such discovery summarizing the findings including the immediacy and magnitude of any potential threat(s) to human health and/or the environment.
- (2) DTSC may require the owner and/or operator to investigate, mitigate and/or take other applicable action to address any immediate or potential threats to human health and/or the environment, newly identified releases of hazardous waste and/or hazardous constituents, or newly identified SWMUs. Upon written request by DTSC, the owner and/or operator shall submit to DTSC any required documents which may include, but are not limited to, IM Workplans and/or RFI Workplans. The required documents shall be developed in a manner consistent with the applicable Scope of Work appended to this Permit or with other guidance to be provided by DTSC. DTSC will review the required documents

and notify the owner and/or operator in writing of the DTSC's approval or disapproval, including any comments and/or modification, in accordance with DTSC

Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit. If DTSC determines that immediate action is required, DTSC's Project Coordinator may orally authorize the owner and/or operator to act prior to DTSC's receipt or approval of any required workplans.

(c) PHASE I RFI

- (1) Within 90 days of the effective date of this Permit, the owner and/or operator shall submit to DTSC a Current Conditions Report and a Workplan for a Phase I RFI ("Phase I RFI Workplan"), including a proposed schedule of implementation and completion, for each of the fifteen SWMUs identified above in Part IV, section 3. The Current Conditions Report and Phase I RFI Workplan shall be developed in a manner consistent with the Scope of Work for a Phase I RFI contained in Attachment 2. DTSC will review the Current Conditions Report and Phase I RFI Workplan and notify the owner and/or operator in writing of DTSC's approval or disapproval, including any comments and/or modifications, in accordance with the DTSC Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit.
- (2) The owner and/or operator shall submit a Phase I RFI Report to DTSC in accordance with the schedule contained in the approved Phase I RFI Workplan. The Phase I RFI Report shall be developed in a manner consistent with the Scope of Work for a Phase I RFI contained in Attachment 2. If there is a phased investigation, separate RFI Reports for each phase and a summary report that summarizes the findings from all phases of the RFI must be submitted to DTSC. DTSC will review the RFI Report(s) and notify the owner and/or operator in writing of DTSC's approval or disapproval, including any comments and/or modifications, in accordance with the DTSC Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit.

(d) RFI

- (1) Within 60 days of the effective date of closure plan approval, the owner and/or operator shall submit to DTSC a Current Conditions Report and a Workplan for a RFI ("RFI Workplan") for each of the surface impoundments identified above as SWMUs (RCRA-L, -M, -N, -P and -Q). When requested by DTSC in writing, the owner and/or operator shall submit to DTSC a Current Conditions Report and a RFI Workplan for any of the other SWMUs. All RFI Plans

submitted shall include schedules of implementation and completion of specific actions necessary to determine whether soil, ground water or air releases have occurred or are occurring. The Current Conditions Report and RFI Workplan shall be developed in a manner consistent with the Scope of Work for a RFI contained in Attachment 3 to this Permit. DTSC will review the Current Conditions Report and RFI Workplan and notify the owner and/or operator in writing of DTSC's approval or disapproval, including any comments and/or modifications, in accordance with the DTSC Approval/Reporting/ Proposed Contractor/Additional Work section of this Part of the Permit.

- (2) The RFI Workplan shall detail the methodology to: (1) gather data needed to make decisions on IMs/stabilization during the early phases of the RFI; (2) identify and characterize all sources of contamination; (3) define the nature, degree and extent of contamination; (4) characterize the potential pathways of contaminant migration; (5) define the rate of movement and direction of contaminant flow; (6) identify actual or potential human and/or ecological receptors; and (7) support development of alternative remedial approaches or methods from which a corrective measure will be selected by DTSC. A specific schedule for implementation of all activities shall be included in the RFI Workplan (e.g., submittal of phase 2 workplan, submittal of RFI Reports, etc.).
- (3) The owner and/or operator shall submit a RFI Report to DTSC in accordance with the schedule contained in the approved RFI Workplan. The RFI Report shall be developed in a manner consistent with the Scope of Work for a RFI contained in Attachment 3.

If there is a phased investigation, separate RFI Reports for each phase and a summary report that summarizes the findings from all phases of the RFI must be submitted to DTSC. DTSC will review the RFI Report(s) and notify the owner and/or operator in writing of DTSC's approval or disapproval, including any comments and/or modifications, in accordance with the DTSC Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit.

- (4) Concurrent with the submission of a RFI Workplan, the owner and/or operator shall submit to the department a Health and Safety Plan in accordance with Attachment 1 to this Permit. If Workplans for both IMs and RFI are required by this Part of the Permit, the owner and/or operator may submit a single Health and Safety Plan that addresses the combined IM and RFI activities.

- (5) The owner and/or operator shall submit a RFI Summary Fact Sheet to DTSC that summarizes the findings from all phases of the RFI. The RFI Summary Fact Sheet shall be submitted to DTSC in accordance with the schedule contained in the approved RFI Workplan. DTSC will review the RFI Summary Fact Sheet and notify the owner and/or operator in writing of DTSC's approval or disapproval, including any comments and/or modifications, in accordance with the DTSC Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit. When DTSC approves the RFI Summary Fact Sheet, the owner and/or operator shall mail the approved RFI Summary Fact Sheet to all individuals on the facility mailing list established pursuant to California Code of Regulations, title 22, section 66271.9(c)(1)(D), within 15 calendar days of receipt of written approval.
- (e) Corrective Measures Study (CMS)
- (1) DTSC will require a CMS if contaminant concentrations exceed current health-based action levels and/or if DTSC determines that the contaminant releases pose a potential threat to human health and/or the environment.
- (2) Within 45 days after the owner and/or operator receives a written request from DTSC, the owner and/or operator shall submit a CMS Workplan to DTSC. The CMS Workplan shall be developed in a manner consistent with the Scope of Work for a CMS contained in Attachment 4 to this Permit. DTSC will review the CMS Workplan and notify the owner and/or operator in writing of DTSC's approval or disapproval, including any comments and/or modifications, in accordance with the DTSC Approval/Reporting/ Proposed Contractor/Additional Work section of this Part of the Permit.
- (3) The CMS Workplan shall detail the methodology for developing and evaluating potential corrective measures to remedy any contamination at the Facility. The CMS Workplan shall identify the potential corrective measures, including any innovative technologies that may be used for the containment, treatment, remediation, and/or disposal of contamination.
- (4) The owner and/or operator shall conduct treatability studies for all potential corrective measures that involve treatment except where the owner and/or operator can demonstrate to DTSC's satisfaction that they are not needed. The CMS Workplan shall include, at a minimum, a summary of the proposed treatability study including a conceptual design, treatability study including a conceptual design, a schedule for submitting a treatability study workplan, or the owner and/or operator's justification for not proposing a treatability study.

- (5) The owner and/or operator shall submit a CMS Report to DTSC in accordance with the schedule contained in the approved CMS Workplan. The CMS Report shall be developed in a manner consistent with the Scope of Work for a CMS contained in Attachment 4 to this Permit. DTSC will review the CMS Report and notify the owner and/or operator in writing of DTSC's approval or disapproval, including any comments and/or modifications, in accordance with the DTSC Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit.

(f) California Environmental Quality Act (CEQA)

DTSC must comply with the CEQA insofar as activities required by this Permit are projects requiring CEQA compliance. DTSC will prepare an Initial Study as required by CEQA. Based on the results of the Initial Study, DTSC will determine if a Negative Declaration or Environmental Impact Report (EIR) should be prepared. DTSC will prepare and process any such Negative Declarations. However, should the Initial Study indicate that an EIR is necessary, such an EIR would be prepared under separate agreement between DTSC and the owner and/or operator.

(g) CORRECTIVE MEASURES IMPLEMENTATION

- (1) DTSC will evaluate corrective measure alternatives presented in the approved CMS Report. Based on the evaluation, DTSC may propose a corrective measure (or measures) for implementation at the Facility. The proposed corrective measures(s) must: (1) be protective of human health and/or the environment; (2) meet the media cleanup standards; (3) control the source(s) of releases(s) so as to reduce or eliminate, to the maximum extent practicable, further releases that might pose a threat to human health and/or the environment; and (4) meet all applicable waste management requirements.
- (2) DTSC may modify this Permit to require the owner and/or operator to implement the proposed corrective measure(s). The permit modification will be done in accordance with the requirements contained in California Code of Regulations, title 22, section 66270.41. As a part of the permit modification process, the public will have an opportunity to review and comment on a draft of the modified permit, DTSC's proposed corrective measure(s) for the Facility, and DTSC's justification for selection of such corrective measure(s) (the "Statement of Basis").
- (3) Following the public comment period, DTSC will prepare a formal response to all public comments received regarding the Permit modification ("Response to Comments"). DTSC may, as a result of

the public comments, issue the final modified permit, require the owner and/or operator to do additional work, or select an alternative corrective measure for implementation at the Facility.

- (4) Nothing in this Permit shall limit DTSC's authority to implement the selected corrective measure(s) or to take any other appropriate action under the laws and regulations of the State of California, or any other legal authority, including the filing of a civil action seeking a judicial order directing the owner and/or operator to implement the selected corrective measure(s).

6. DTSC APPROVAL/REPORTING/PROPOSED CONTRACTOR/ADDITIONAL WORK

(a) DTSC APPROVAL

- (1) DTSC will provide the owner and/or operator with its written approval, approval with conditions and/or modifications, disapproval, or disapproval with comments for any workplan, report (except progress reports), specification or schedule submitted pursuant to or required by this Permit.
- (2) The owner and/or operator shall revise any workplan, report, specification or schedule in accordance with DTSC's written comments. The owner and/or operator shall submit to DTSC any revised submittals in accordance with a due date specified by DTSC. Revised submittals are subject to DTSC approval or disapproval, with comments and/or modification.
- (3) Upon receipt of DTSC's written approval, the owner and/or operator shall commence work and implement any approved workplan or plan in accordance with the schedule and provisions contained therein.
- (4) Any DTSC approved workplan, report, specification, or schedule, shall be deemed incorporated into this Permit. Any non-compliance with such approved workplans, reports, specifications or schedules shall be considered non-compliance with this Permit. Prior to this written approval, no workplan, report, specification or schedule shall be construed as approved and final. Verbal advice, suggestions, or comments given by DTSC representatives will not constitute an official approval, nor shall any verbal approval or verbal assurance be considered binding.

(b) REPORTING

- (1) Beginning with the first full month following the effective date of this

Permit, until suspended by DTSC in writing, the owner and/or operator shall provide DTSC with quarterly progress reports of corrective action activities conducted and to be conducted pursuant to this Part of the Permit. Progress reports are due the fifteenth of the month following the last month of the quarter. The progress reports shall conform to the requirements contained in Attachment 5 to this Permit. DTSC may adjust the frequency of progress reporting to be consistent with site-specific activities.

- (2) Any report or other document submitted by the owner and/or operator pursuant to this Part of the Permit shall be signed and certified by a responsible corporate officer of the owner and/or operator or a duly authorized representative in accordance with California Code of Regulations, title 22, section 66270.11.
- (3) Two copies of all documents, including but not limited to, workplan(s), reports, and other correspondence to be submitted pursuant to this Part of the Permit shall be hand delivered, sent by certified mail, return receipt requested, or by overnight express mail to the DTSC Project Coordinator or to other addresses she/he designates. Submittals specifically exempted from the two copy requirement outlined above are all progress reports, and any other correspondence of less than 15 pages, of which one copy is required. All submittals required by this Permit shall be printed on recycled paper and shall be copied double-sided whenever practicable.
- (4) Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices or other submissions relating to or required under this Part of the Permit shall be in writing and shall be sent to the respective Project Coordinators.
- (5) The owner and/or operator shall submit to DTSC upon request the results of all sampling and/or tests or other data generated pursuant to this Part of the Permit.

(c) PROPOSED CONTRACTOR/CONSULTANT

All work performed pursuant to this Part of the Permit shall be under the direction and supervision of a California registered professional engineer hydrologist, or geologist with expertise in hazardous waste site cleanup. The owner and/or operator's contractor or consultant shall have the technical expertise sufficient to adequately perform all aspects of the work for which they are responsible. Within fourteen days of the effective date of this Permit, the owner and/or operator shall notify the DTSC Project Coordinator in writing of the name, title, and qualifications of the engineer or geologist, and of any contractors or consultants and their personnel to

be used in carrying out this Part of the Permit.

(d) ADDITIONAL WORK

DTSC may determine or the owner and/or operator may propose that certain tasks, including investigatory work, remedial action, engineering evaluation, or procedure/methodology modification are necessary in addition to, or in lieu of, the tasks and deliverables included in any workplan approved by DTSC. DTSC shall request in writing that the owner and/or operator perform the additional work and shall specify the basis and reasons for DTSC's determination that the additional work is necessary. Within 14 days after the receipt of such determination, the owner and/or operator shall have the opportunity to meet or confer with DTSC to discuss the additional work DTSC has requested. If required by DTSC, the owner and/or operator shall submit a workplan to DTSC for additional work. Such workplan shall be submitted to DTSC according to a schedule established by DTSC. Upon approval of a workplan, the owner and/or operator shall implement it in accordance with the provisions and schedule contained therein.

7. QUALITY ASSURANCE

- (a) Workplans shall contain quality assurance/quality control and chain of custody procedures for all sampling, monitoring and analytical activities.
- (b) The name(s), address and telephone numbers of the California State certified analytical laboratories the owner and/or operator proposes to use must be specified in the applicable workplan(s).
- (c) All workplans required under this Part of the Permit shall include data quality objectives for each data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use(s).
- (d) The owner and/or operator shall ensure that data of appropriate quality are obtained by its consultant or contract laboratories. The owner and/or operator shall ensure that California State Certified laboratories used by the owner and/or operator have in place a quality assurance program plan and perform analyses according to the latest approved edition of "Test Methods for Evaluating Solid Waste, (SW-846)", or other methods deemed satisfactory by DTSC. If methods other than standard methods are to be used, the owner and/or operator shall specify all such methods in the applicable workplan (e.g., RFI workplan). DTSC may reject any data that do not meet the requirements of the approved workplan or the analytical methods, and may require resampling and analysis.

- (e) DTSC may conduct a performance and quality assurance/quality control audit of the laboratories chosen by the owner and/or Operator before, during or after sample analyses. Upon request by DTSC, the owner and/or operator shall have its selected California State certified laboratory perform analyses of samples provided by DTSC to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control, resampling and analysis may be required.

8. SAMPLING/ACCESS

(a) SAMPLING

- (1) The owner and/or operator shall notify DTSC in writing at least 14 days prior to beginning each separate phase of field work approved under any workplan required by this Part of the Permit. If the owner and/or operator believes it must commence emergency field activities without delay, the owner and/or operator may seek emergency telephone authorization from the DTSC Project Coordinator or, if the Project Coordinator is unavailable, his/her immediate supervisor, to commence such activities immediately. At the request of DTSC, the owner and/or operator shall provide or allow DTSC or its authorized representative to take split or duplicate samples of all samples collected by the owner and/or operator pursuant to this Part of the Permit.
- (2) The owner and/or operator shall submit to DTSC upon request the results of all sampling and/or tests or other data generated by its employees, divisions, agents, consultants or contractors pursuant to this permit.
- (3) Notwithstanding any other provisions of this Permit, DTSC retains all of its information gathering and inspection authority and rights including enforcement actions related thereto, under Health and Safety Codes and any other applicable state or federal statutes or regulations.

(b) ACCESS

- (1) DTSC, its contractors, employees, and/or any U.S. EPA representatives are authorized to enter and freely move about the Facility pursuant to this Part of the Permit for the purposes of: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts related to the Facility; reviewing the progress of the owner and/or operator in carrying out the terms of this Part of the Permit; conducting such tests, sampling or

monitoring as DTSC or its Project Coordinator deems necessary; using a camera, sound recording, or other documentary type equipment; and verifying the reports and data submitted to DTSC by the owner and/or operator. The owner and/or operator shall provide DTSC and its representatives access at all reasonable times to the Facility and any other property to which access is required for implementation of this Part of the Permit and shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Part of the Permit.

- (2) To the extent that work being performed pursuant to this Part of the Permit must be done on property not owned or controlled by the owner and/or operator, the owner and/or operator shall use its best efforts to obtain access agreements necessary to complete work required by this Part of the Permit from the present owner(s) of such property within 30 days of approval of any workplan for which access is required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from the owner and/or operator to the present owner(s) of such property requesting access agreement(s) to allow the owner and/or operator and DTSC and its authorized representatives access to such property and the payment of reasonable sums of money in consideration of granting access. The owner and/or operator shall provide the DTSC Project Coordinator with a copy of any access agreement(s). In the event that agreements for access are not obtained within 30 days of approval of any workplan for which access is required, or of the date that the need for access became known to the owner and/or operator, the owner and/or operator shall notify DTSC in writing within fourteen (14) days thereafter regarding both the efforts undertaken to obtain access and its failure to obtain such agreements. In the event DTSC obtains access, the owner and/or operator shall undertake approved work on such property.
- (3) Nothing in this Part of the Permit shall be construed to limit or otherwise affect the owner and/or operator's liability and obligation to perform corrective action including corrective action beyond the Facility boundary, notwithstanding the lack of access. DTSC may determine that additional on-site measures must be taken to address releases beyond the Facility boundary if access to off-site areas cannot be obtained.
- (4) Nothing in this section limits or otherwise affects DTSC's right of access and entry pursuant to any applicable state or federal laws and regulations.

9. RECORD PRESERVATION

- (a) The owner and/or operator shall retain, during the term of this Permit, all data, records and documents gathered or generated during activities undertaken pursuant to this Part of the Permit. All such documents shall be stored in a centralized location at the Facility (or other location approved by DTSC) and be made available to DTSC or its representatives upon request. The owner and/or operator shall notify DTSC in writing at least 90 days prior to final expiration of this Permit, and shall provide DTSC with the opportunity to take possession of any such records. Such written notification shall reference this Permit (including expiration date) and shall be addressed to the DTSC Project Coordinator.
- (b) The owner and/or operator shall obtain copies of all data, records and documents gathered or generated by any agent, consultant, or contractor employed by the owner and/or operator to carry out the terms of this Part of the Permit.

10. DISPUTE RESOLUTION

- (a) DTSC and the owner and/or operator shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion relating to Part IV of this Permit.
- (b) If the owner and/or operator disagrees, in whole or in part, with any written decision by DTSC relating to DTSC modification of interim deliverables submitted by the owner and/or operator or to additional work required by DTSC pursuant to this Part of the Permit, the owner and/or operator Project Coordinator shall orally notify the DTSC Project Coordinator of the dispute. The Project Coordinators shall attempt to resolve the dispute informally.
- (c) If the Project Coordinators cannot resolve the dispute informally, the owner and/or operator may pursue the matter formally by placing its objections in writing. The owner and/or operator's written objections must be directed to the Permitting Branch Chief, with a copy to the DTSC Project Coordinator, within 14 days of the owner and/or operator's receipt of the DTSC decision. The owner and/or operator's written objection must set forth the specific points of the dispute and the basis for the owner and/or operator's position.
- (d) DTSC and the owner and/or operator shall have 14 days from DTSC's receipt of the owner and/or operator's written objections to attempt to resolve the dispute through formal discussions. This time period may be extended by DTSC for good cause. During such time period, the owner and/or operator will have an opportunity to meet or confer with DTSC to discuss the dispute and the owner and/or operator's objections.

- (e) After the formal discussion period, DTSC will provide the owner and/or operator with its written decision on the dispute. DTSC's written decision will reflect any agreements reached during the formal discussion period and be signed by the Permitting Branch Chief of Region 1. The decision shall be incorporated into and become an enforceable part of this Permit. The decision is not subject to further dispute resolution.
- (f) If the owner and/or operator fails to follow any of the requirements contained in this Part of the Permit then it shall have waived its right to further consideration of the disputed issue.
- (g) The existence of a dispute as defined herein, and DTSC's consideration of such matters as placed into dispute shall not excuse, toll or suspend any compliance obligation or deadline required pursuant to this Part of the Permit during the pendency of the dispute resolution process.

11. MODIFICATION

- (a) The owner and/or operator must request a permit modification to revise any submittal dates specified for Part IV of this Permit. To request such a revision, the owner and/or operator must use the procedures for a Class 1 permit modification with prior DTSC approval in accordance with California Code of Regulations, title 22, section 66270.42. Such requests must be timely and provide justification for any proposed submittal date revisions.
- (b) If at any time DTSC determines that modification of this Part of the Permit is necessary, DTSC may initiate a modification to this Part of the Permit according to the procedures in California Code of Regulations, title 22, section 66270.41.
- (c) Any requests for a revision of an approved workplan (or plan) requirement must be in writing. Such requests must be timely and provide justification for any proposed workplan revision. DTSC has no obligation to approve such requests, but if it does so, such approval will be in writing and signed by the Permitting Branch Chief of Region 1. Any approved workplan modification shall be incorporated by reference into this Permit.

PART V PERMIT MODIFICATION HISTORY

The following at the dates, along with a brief description, of each permit modification that has taken place since the issuance of the Permit on February 28, 1997.

1. On June 10, 1997, a class 1 permit modification was implemented because of a few minor typographical errors.
2. On October 22, 1999, a class 1 permit modification request was approved allowing the transfer of ownership of the Aerojet facility from Aerojet-General Corporation to GenCorp, Incorporated (GenCorp). This change in ownership was necessary in order for both Aerojet-General Corporation and Aerojet Fine Chemicals LLC to operate on the facility as subsidiaries of GenCorp.
3. On January 19, 2001, a class 1 permit modification request was approved allowing the upgrade of the piping at the RCRA-L storage and treatment unit. This modification was necessary to provide the piping, valves, and fittings necessary for the removal of wastewater from the F-Area 300,000 gallon storage tank without first transferring the waste into the treatment tanks.
4. On August 31, 2001, a class 1 permit modification request was approved allowing the following changes to occur: (1) GenCorp's mailing address; (2) Aerojet Fine Chemical LLC's EPA Identification Number in the Part A permit application; and (3) replace of two older carbon adsorption tanks, V2009A and V2009B, at the RCRA-Z Dilute Treatment Plant with new similar tanks.
5. On April 18, 2002, a class 1 permit modification request was approved granting Aerojet authority to: (1) add the closure of the open burn pad #12 to the DTSC approved RCRA-R closure plan; and (2) spend additional time to complete closure of the RCRA-R facility.
6. On July 22, 2002, a class 1 permit modification request was approved allowing for the update of the Emergency Response/Contingency Plan within Aerojet's Part B Permit Application.
7. On September 9, 2002, a class 1 permit modification request was approved allowing the following: (1) repair the RCRA-Y secondary containment coating, which has deteriorated and cracked; (2) extend the time to complete the RCRA-R (open burn area) closure activities; and (3) extend the time to complete the closure of the Incinerator, which includes the Propellant Thermal Processor, Storage Building 16006 and the tank farm.
8. On January 14, 2003, a class 3 permit modification request was approved allowing the removal of two parcels of land from the RCRA facility boundary and the Permit and terminating corrective action for the two parcels. These two parcels of land were located within the National Priorities List Carve-Out Area.

9. On May 14, 2003, class 1 and class 2 permit modification requests were approved with the approval of the revised Hazardous Waste Facility Permit Application, Part B, Treatment and Storage Facility (Permit Application), dated March 31, 2003. This Permit Application is a revision of the September 20, 2002 Permit Application, which was a revision of the June 1999 Permit Application.
10. On June 20, 2003, a class 3 permit modification request was approved allowing the removal of approximately 2600 acres of land from the RCRA facility boundary, the Permit and the termination of corrective action for this land. These 2600 acres of land were carved-out from the National Priorities List Site.
11. On September 22, 2003, a number of class 1 permit modification requests (see requests dates below) were approved allowing Aerojet to perform the following:
 - (1) Anchor the RCRA-Y 10,000 gallon Fiberglass Reinforced Plastic tank to the secondary containment foundation (December 10, 2002);
 - (2) Provide lateral support for RCRA-Z 20045 Dilute Plant tanks, T-2201, T-2203, R-2101, R-2100, T-2700, R-2600, R-2601, V-2200, V-2202 and V-2302 (January 16, 2003);
 - (3) Replace 5 flow control valves, each 6 inches in diameter, with similar valves and perform cooling tower containment pan repair or replacement on the RCRA-J Wastewater Storage and Treatment System (April 14, 2003);
 - (4) Install new motion detector and intrusion alarm system at RCRA-C Building 03010 Container Storage Unit (April 24, 2003);
 - (5) Replace and upgrade the industrial water supply line on the RCRA-J Wastewater Storage and Treatment System (May 29, 2003); and
 - (6) Upgrade the RCRA Part A Permit Application and modify the RCRA Part B Permit Application Facility Identification, Emergency Procedures and Training Sections (August 6, 2003).
12. In June 2004, a class 3 permit modification initiated by DTSC was approved indicating that the post-closure operation and maintenance activities associated with the two underground deep injection wells are now part of permit. Also, in June 2004, a number of class 1 permit modification requests (see request dates below) were approved allowing Aerojet to perform the following:
 - (1) Replace the RCRA-J Cooling Towers and perform related repairs. These changes were necessary, since the current cooling towers were 15 years old and were close to their serviceable life expectancy (October 22, 2003);

- (2) Replace a sump pump at the RCRA-L Wastewater Storage and Treatment System. The sump pump is used to transfer water that collects in the containment of the wastewater storage tank (January 21, 2004);
 - (3) Install a fence around the outer perimeter of the RCRA-Y and RCRA-Z Line 02 Wastewater Storage Units. This fence was to restrict access to the units during the operation, maintenance, construction and proposed future closure activities (January 22, 2004);
 - (4) Replace a level gauge at the RCRA-T Wastewater Storage System. The gauge is used to measure the level of wastewater that collects in the wastewater storage tank (February 2, 2004);
 - (5) Replace the backup transfer valve on Pump 2702 at RCRA-Z Dilute Wastewater Treatment and Storage Unit. The wastewater treatment and storage unit is located at Building 20045 (March 1, 2004);
 - (6) Replace a PVC ball valve, 3 feet of 2 inch PVC pipe and a PVC basket strainer on a line from Tank 2701 at RCRA-Z Dilute Wastewater Treatment and Storage Unit. The valve, 3 feet of pipe and basket strainer are located at Building 20045 (March 8, 2004); and
 - (7) Install potable water lines and safety shower eyewash at RCRA-PDP Buildings 37014 and 04080 Hazardous Waste Treatment System. The repair and upgrade of the water lines were at Buildings 37014 and 04080 and the installation of the safety shower eyewash was at Building 04080 (March 8, 2004).
13. In October 2005, a class 3 permit modification request was approved allowing the removal of property at 12000 Folsom Boulevard from the Aerojet RCRA Facility Boundary. The property is owned by Schnitzer Steel Industries. Lead contamination was discovered on the property requiring investigation and excavation of the contaminated soil. With the submittal by Schnitzer Steel Industries of the Report of Findings, DTSC determined that the parcel had been cleaned to industrial standards and no further corrective action was necessary. Also, in October 2005, a number of class 1 permit modification requests (see requested dates below) were approved allowing Aerojet to perform the following:
- (1) Add existing waste streams to RCRA-J Storage and Treatment Unit and RCRA-Z Line 02 Storage Unit. These changes were necessary to ensure that Aerojet had the capability to store and treat existing waste streams in applicable permitted storage and treatment units while other units are undergoing maintenance or repair (May 5, 2004),

- (2) Install high level alarm at RCRA-T Hazardous Waste Storage Tank. The new alarm will provide 24 hours a day, 7 days per week surveillance capability preventing overflow into the sump and secondary containment (September 1, 2004),
 - (3) Amend the RCRA PDP Class 1.1 and 1.3 Closure Plan. The closure plan was amended allowing Aerojet to demolition, remove and dispose of equipment, piping, tanks and structures and dispose of this material as hazardous waste (September 10, 2004),
 - (4) Revisions to sections of the Part B permit application related to the RCRA-C Building 03016, RCRA-E Buildings 15001N and 15005 and RCRA-I closures (October 14, 2004),
 - (5) Extend the time period by 180 days for the closure activities at RCRA-Y, RCRA-C Building 48008, RCRA-PDP Building 04080 and RCRA-PDP Building 37014 (February 9, 2005), and
 - (6) Replace RCRA-J Cooling Towers and perform related repairs. These changes were necessary, since the current cooling towers were 15 years old and were close to their serviceable life expectancy (February 15, 2005).
14. In December, 2005, a Class 1 permit modification was approved changing the owner of the facility from GenCorp Incorporated to Aerojet- General Corporation and removing Aerojet Fine chemicals as one of the operators.
 15. In September, 2007, a Class 2 permit modification was approved authorizing improvements to the western portion of RCRA-C Bldg. 03006 (see revised Part B for details) and the movement of PEP wastes from Bldg. 03010 to the improved portion of Bldg. 03006. (See Attachment 7 for site map.) The eastern half of Bldg. 03006 has been closed, and closure certification is pending approval. The closure of Bldg. 03010 is pending.